What is Claimed is:

1. A video time code synchronized robot control apparatus comprising:

a robot including an arm movable through a path of movement;

a video camera, mounted on the arm of the robot, for generating video signals during movement of the video camera;

time code generator means for generating time code information;

a video tape recorder, responsive to the video signals from the video camera and the time code information from the time code generator means, for recording a composite signal formed of the video signals and the time code information on a recording medium;

time code reader means, responsive to the composite video signal from the video tape recorder, for decoding the time code information for each frame of the composite signal; and

robot controller means for controlling the path of movement of the robot arm in accordance with a stored control program, the robot controller means being responsive to the decoded time code information from the time code reader for synchronizing the movement of the robot arm along its predetermined path of movement with the time code information from the time code reader on a frame-by-frame basis.

2. The apparatus of Claim 1 further comprising:

monitor means, connected to the video tape recorder, for displaying video images from one of the video camera and the composite image recorded on a video tape.

1   3.   The apparatus of Claim 1 wherein:

2   video signals from the video camera are output to the

3   time code generator means; and

4   the time code generator means outputs the video signals

5   and the time code information to the video tape recorder.

1   4.   The apparatus of Claim 3 wherein the composite

2   signal from the video tape recorder is input to the time code

3   reader means.

1   SUB A2   5.   The apparatus of Claim 1 wherein:

2   the video signals from the video camera are output to the

3   video tape recorder; and

4   the time code information from the time code generator

5   means is output to the video tape recorder.

1   6.   The apparatus of Claim 5 wherein:

2   the composite signal from the video tape recorder is

3   input to the time code reader means.

1   SUB A3   7.   The apparatus of Claim 1 wherein:

2   the video signals from the video camera are input to a

3   combined video time code generator and reader means for separately

4   generating time code information and for decoding time code

5   information, the time code information being output to the video

6   tape recorder.

1   8.   The apparatus of Claim 7 wherein the composite

2   signal from the video tape recorder is input to the combined time

3   code generator and reader means for decoding the time code

4   information and for outputting the decoded time code information to

5   the robot controller.

9.   The apparatus of Claim 1 wherein:

2   the robot controller means includes means for identifying

3 the positional coordinate of the robot arm corresponding in time

4 with each frame of video signals generated by the video camera; and

5   the robot controller means further including means for

6 moving the robot arm to the identified positional coordinates

7 corresponding to any frame of video signals as the time code

8 information identifying the any frame of video signals is input

9 thereto from the time code reader means.

1   10.   A method of generating video images comprising:

2   programming a robot to repeatedly move a video camera

3 mounted on the end of a movable arm of the robot through a

4 predetermined path of movement;

5   operating the video camera to generate video signals from

6 the camera during movement of the arm of the robot;

7   generating time code information in conjunction with the

8 generation of video signals;

9   recording the video signals and the time code information

10 as a composite signal on a recording medium on a frame-by-frame

11 basis;

12   reading and decoding the time code information from the

13 composite signal and supplying the decoded time code information to

14 a robot controller which controls the movement of the arm of the

15 robot along the predetermined path of movement; and

16   synchronizing the movement of the robot arm along the

17 predetermined path of movement with the decoded time code

18 information such that the arm of the robot is positioned by the

19 robot controller in the same position for each frame of video

20 signal as when each frame of video signal was initially generated

21 by the video camera.

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